



Guideline for Application of Certificates to be Issued under the Electricity Rules, 1999 **ELECTRICAL SUPERVISOR**

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ELECTRICAL SUPERVISOR ELECTRICAL INSPECTORATE UNIT

A. Application and downloads

Electrical Supervisor (ES)	ONLINE	https://eutilities.sarawak.gov.my or https://service.sarawak.gov.my
	OTHERS	Report Guideline
		Log Sheet
		Document Checklist (New PC Category)
	Document Checklist ("Restricted" Switching Category)	
CERTIFICATE ISSUANCE	Fulfilling of requirements and pre-requisites can be in any sequence, but certificate issued upon ALL requirements and pre-requisites fulfilled	

B. General requirement

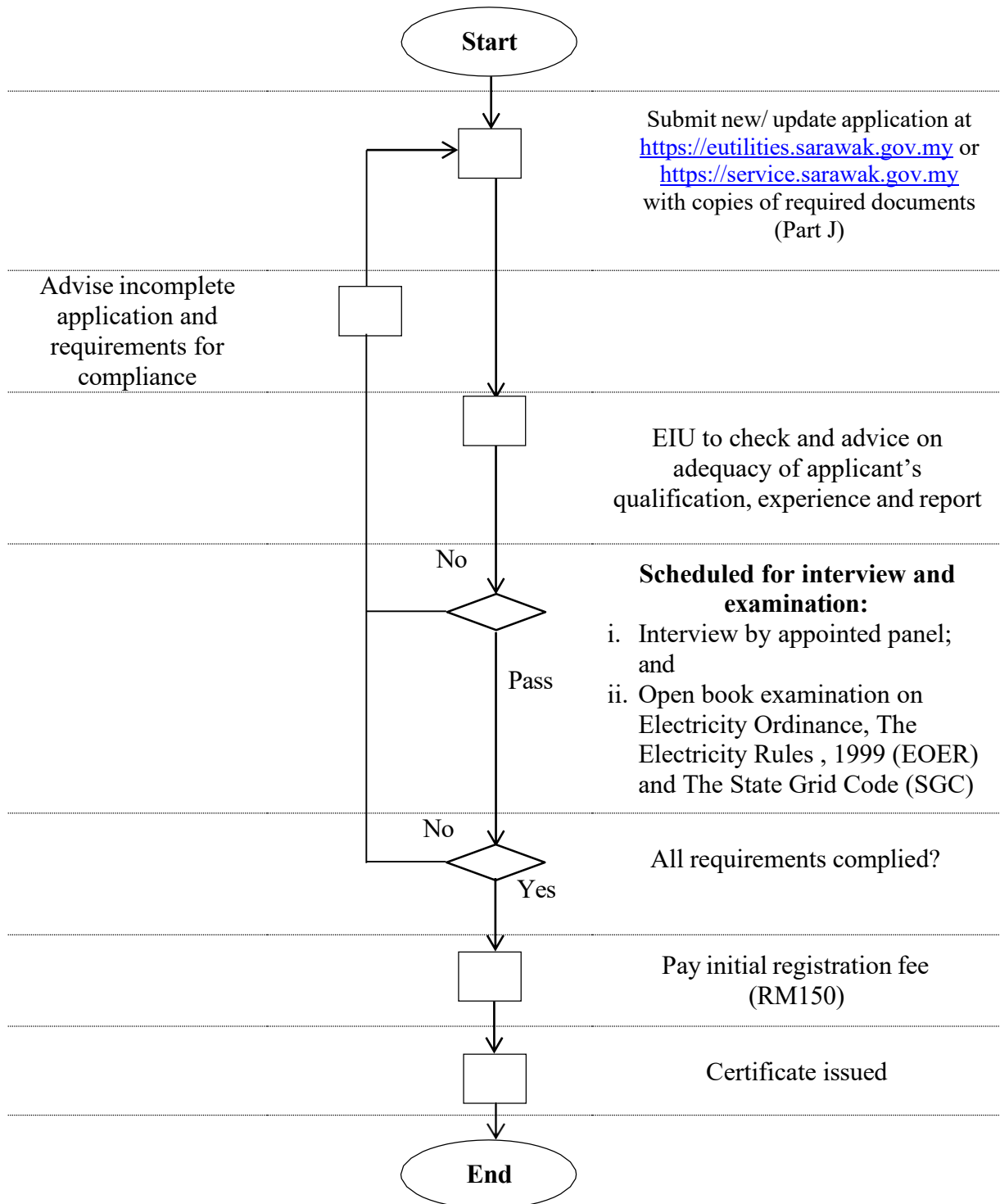
No	Description	Requirements
1	Citizen	Malaysian
2	Educational qualification	Holds a Diploma or equivalent qualification to a Diploma in electrical engineering from a recognised institution
3	Working experience	Not less than five years working experience in an environment where electrical equipment is in operation and has had experience of controlling live equipment
4	Skill and knowledge	<ul style="list-style-type: none"> • Submit report based on knowledge of modern electrical engineering practice, including the principles of operation of equipment used for generation, transmission, distribution, utilisation, protection and metering in electrical installations and energy efficiency management; • Knowledge of first aid, resuscitation and treatment of electric shock; • Pass open book examination for Electricity Ordinance and the Electricity Rules, 1999 (EOER) and State Grid Code (SGC), if required; and • Pass interview by a panel.

C. Competency certificate categories

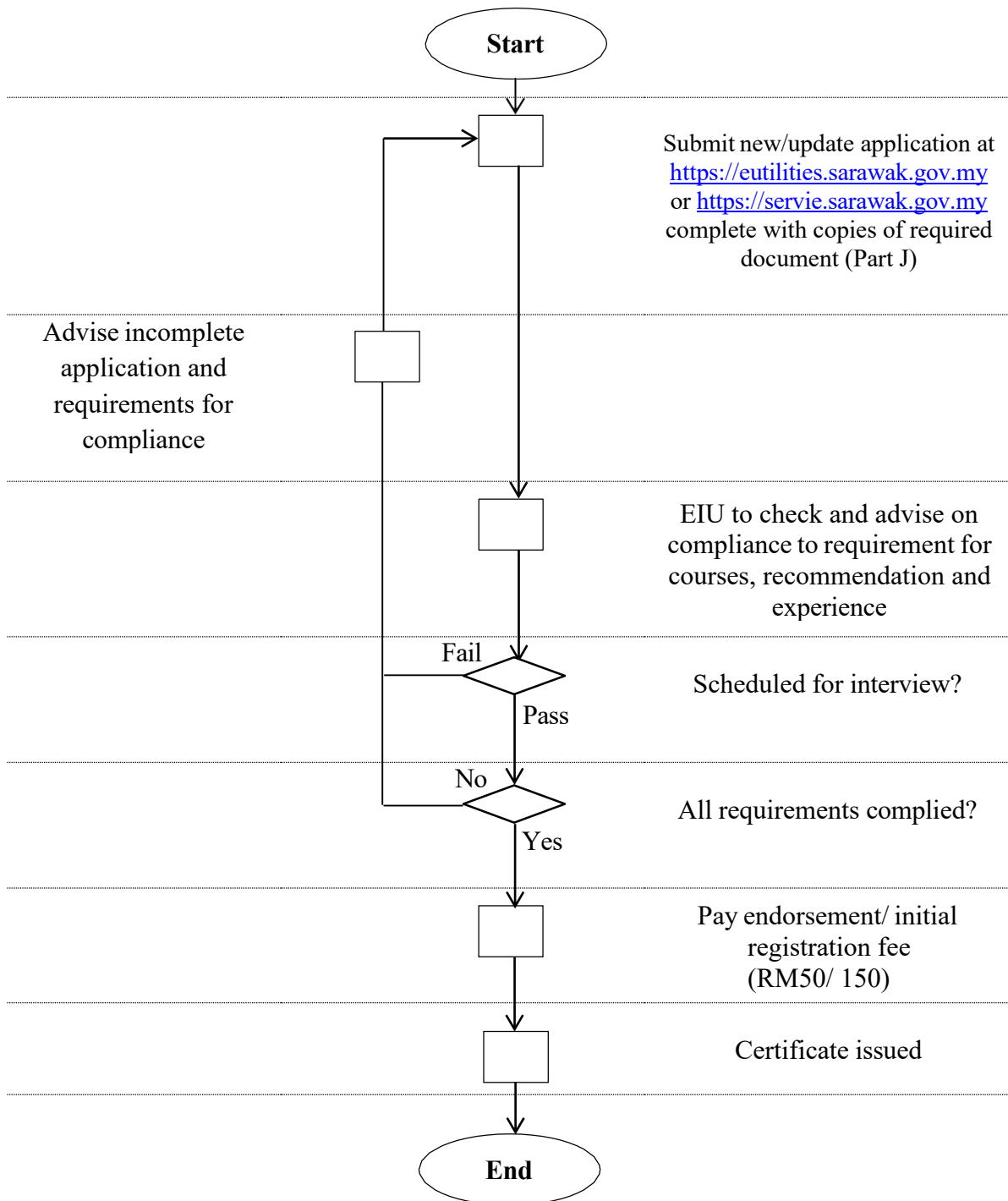
Categories	Voltage Level
Installation & Equipment	LV
Overhead lines	LV up to 11kV up to 33kV up to 132kV up to 275kV
Underground cables	
Electrical substation	
Solar PV Design	Off-Grid system Grid-Connected system Off-Grid and Grid-Connected systems

Switching	Voltage Level	Switching Classes	Pre-Requisite
Restricted (at designated premises)	up to 11 kV up to 33 kV up to 132 kV up to 275 kV up to 500kV	Class 1 - Authorize to issue and cancel electrical permit to work Class 2 - Not authorize to issue and cancel electrical permit to work	<ol style="list-style-type: none"> Certificate holder with high voltage category/(ies) <ul style="list-style-type: none"> If no longer employed, designated switching endorsement is removed. Switching may be re-instated at new designated work premises. Certificate holder with low-voltage category(ies) <ul style="list-style-type: none"> If no longer employed, designated switching endorsement is removed. Switching may be re-instated at new designated work premises. Certificate without Category <ul style="list-style-type: none"> If no longer employed at designated premises, Certificate is revoked. Certificate may be re-issued if employed at new designated premises. Submit required documents (Refer to checklist)
Open (throughout the state)	up to 11 kV up to 33 kV up to 132 kV up to 275 kV up to 500kV	Class 1 - Authorize to issue and cancel electrical permit to work Class 2 - Not authorize to issue and cancel electrical permit to work	<ol style="list-style-type: none"> Only holder with high voltage category(ies); and Attended relevant course and switching attachment

D. Procedure for certificate and new category of Certificate of Competency as an Electrical Supervisor



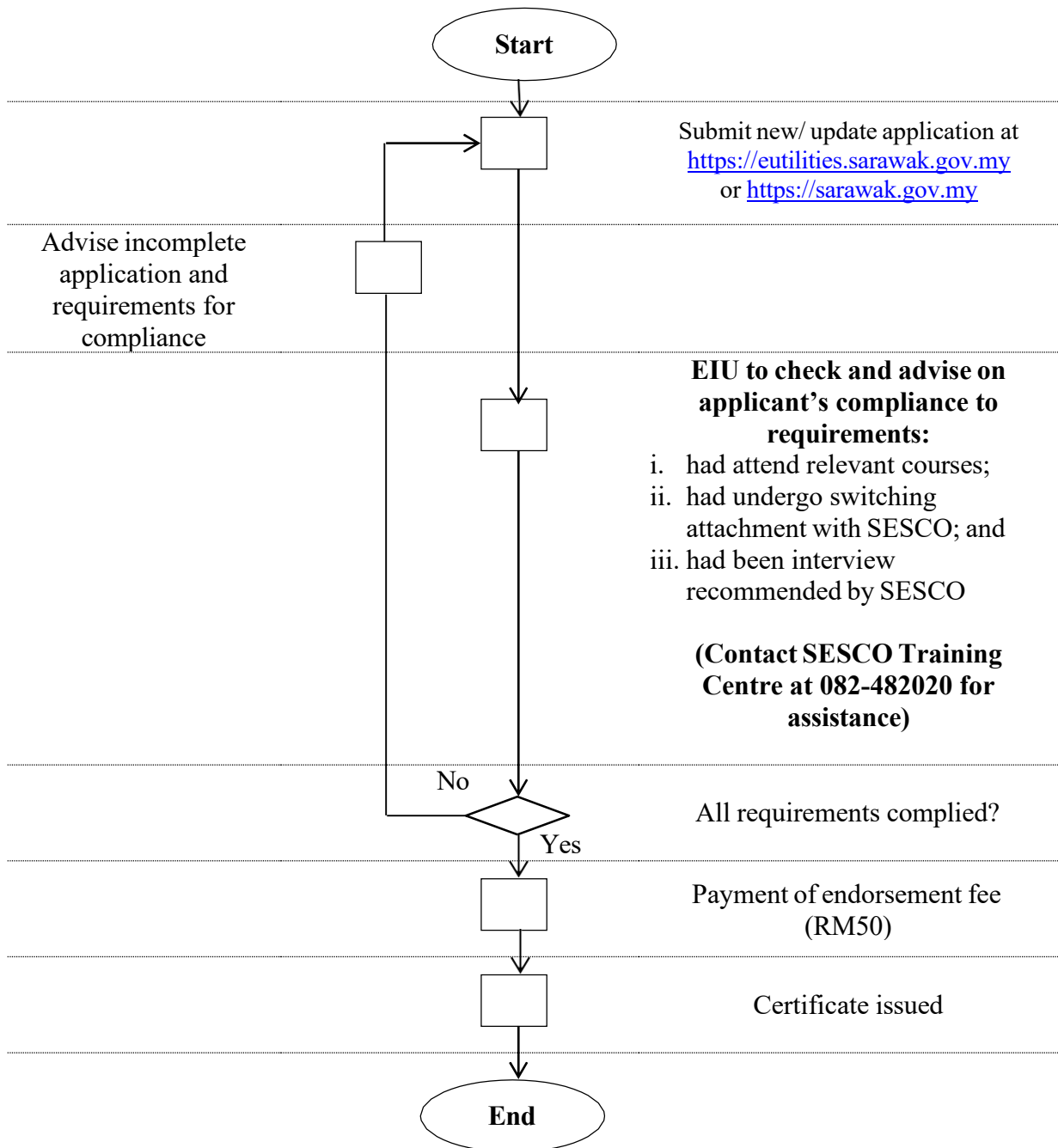
E. Procedure for upgrade of Certificate of Competency as an Electrical Supervisor with 'Restricted' switching



NOTE:

1. Restricted Switching endorsement/ category will indicate designated premises on Certificate of Competency for Chageman/ Electrical Supervisor/ Competent Electrical Engineer
2. Switching if:
 - "Restricted" applicable for designated premises.
 - "Open" applicable for throughout the state.

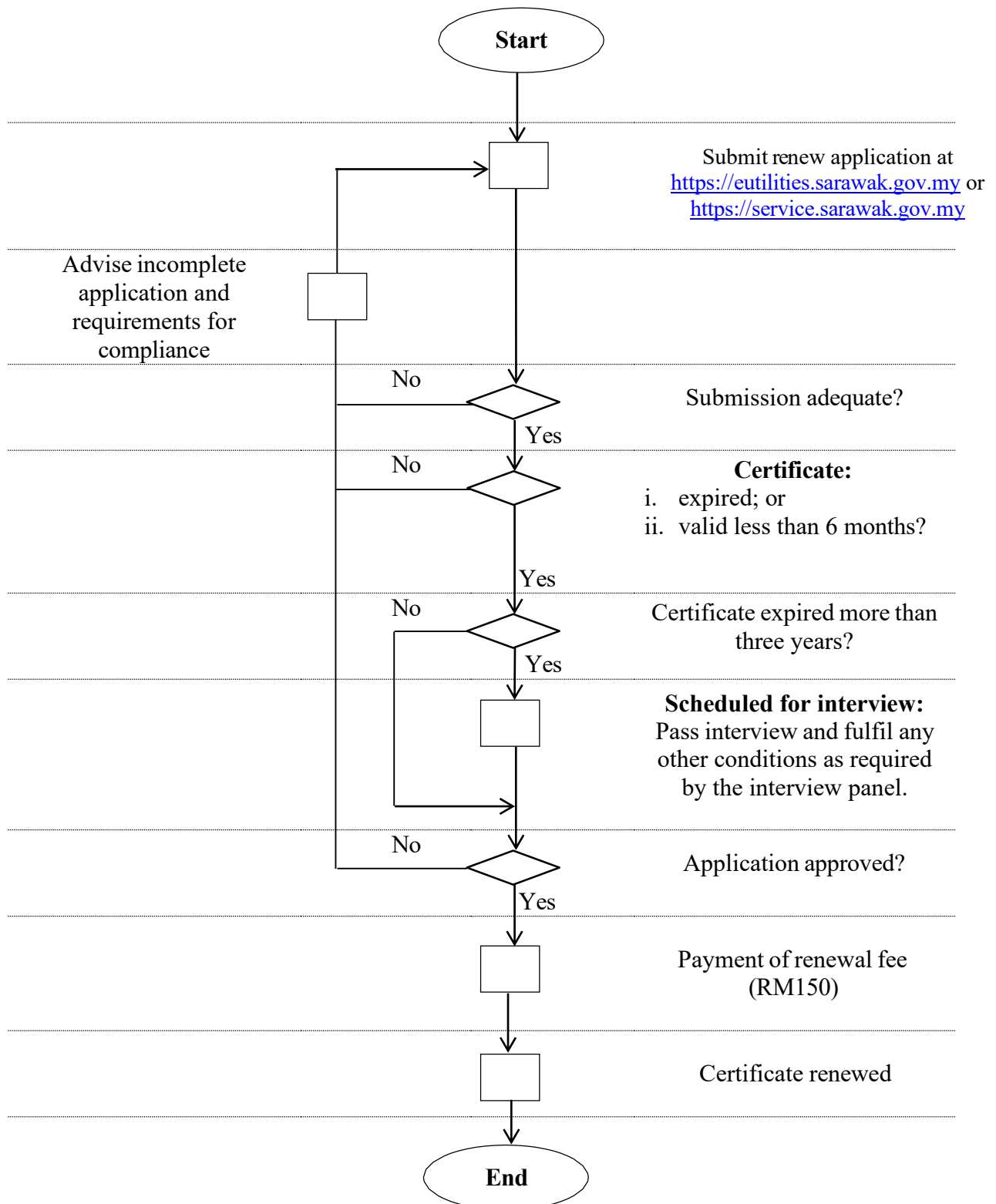
F. Procedure for upgrade of Certificate of Competency as an Electrical Supervisor with 'Open' switching endorsement



NOTE:

- Restricted Switching endorsement/ category will indicate designated premises on Certificate of Competency for Chargeman/ Electrical Supervisor/ Competent Electrical Engineer
- Switching if:
 - “Restricted” applicable for designated premises.
 - “Open” applicable for throughout the state.

G. Procedure for renewal of Certificate of Competency as an Electrical Supervisor



H. Fees

No	Types of Application	Fees
1	Examination (including interview)	RM 150
2	Initial Registration	RM 150
3	Renewal (annually)	RM 150
4	Endorsement (i.e. upgrade)	RM 50

I. Syllabus

No	Document
1	Syllabus for First Aid Course

J. Preparation of document

No	Document	Copies
1	Electrical Supervisor category(ies)	
i	Document Checklist for Submission (CEE & ES)	1
ii	Photo copy of Identification Card (IC)	5
iii	Relevant diploma or degree certificate	5
iv	Testimonial of employment	5
v	Report according to the format in Part A	5
2	Electrical Supervisor with “Restricted” switching endorsement/ category	
i	Document Checklist for Submission (Restricted Switching)	1
ii	Form CAAC 11	1
iii	Photo copy of Identification Card (IC)	2
iv	Authorization letter and support letter from installation owner	2
v	Switching log	2
vi	Switching Procedure Manual	2
vii	Switching Schematic Diagram	2
viii	Testimonial of employment	2

All documents in item (J) are to be submitted to:

**Electrical Inspectorate Unit
8th Floor LCDA Tower,
Lot 2879, Off Jalan Bako,
93050 Kuching, Sarawak**

K. Document for renewal of certificate

No	Document
1	Recent testimonial of employment (if any)
2	Copy of most recent valid First Aid certificate
3	Copy of certificate of recent relevant courses attended (if any)

All documents in item (K) are to be uploaded at:

<https://eutilities.sarawak.gov.my>

or

<https://service.sarawak.gov.my>

PENYELIA ELEKTRIK UNIT MERINYU ELEKTRIK

A. Permohonan dan muaturun

Penyelia Elektrik (ES)	ATAS TALIAN	https://eutilities.sarawak.gov.my or https://service.sarawak.gov.my
	PERKARA LAIN	Garis Panduan Penulisan Laporan
		Helaian Log
		Senarai Semak Dokumen (Kategori KP Baru)
		Senarai Semak Dokumen (Kategori Pensuisan dengan Sekatan)
PENGELUARAN SIJIL	Memenuhi keperluan boleh mengikut mana-mana urutan, tetapi sijil dikeluarkan apabila SEMUA keperluan dipenuhi	

B. Syarat umum

No.	Keterangan	Syarat
1	Warganegara	Malaysia
2	Kelayakan Pendidikan	Memiliki lulusan Diploma atau kelayakan yang setaraf dengan Diploma dalam bidang kejuruteraan elektrik dari universiti atau institusi yang diiktiraf
3	Pengalaman Bekerja	Pengalaman kerja tidak kurang daripada lima tahun dalam persekitaran dimana peralatan elektrik adalah beroperasi dan mempunyai pengalaman mengendalikan peralatan hidup
4	Kemahiran dan pengetahuan	<ul style="list-style-type: none"> • Mengemukakan Laporan berdasarkan pengetahuan berkenaan amalan kejuruteraan elektrik moden, termasuk prinsip-prinsip pengendalian peralatan untuk tujuan penjanaan, penghantaran, pengagihan, penggunaan, perlindungan dan pemeteran dalam pemasangan elektrik dan pengurusan kecekapan tenaga • Pengetahuan tentang pertolongan cemas, bantuan pernafasan dan rawatan renjatan elektrik • Lulus peperiksaan Ordinance Elektrik dan Peraturan Elektrik (EOER), 1999 dan Kod Grid Negeri (SGC), jika perlu; dan • Lulus temuduga panel

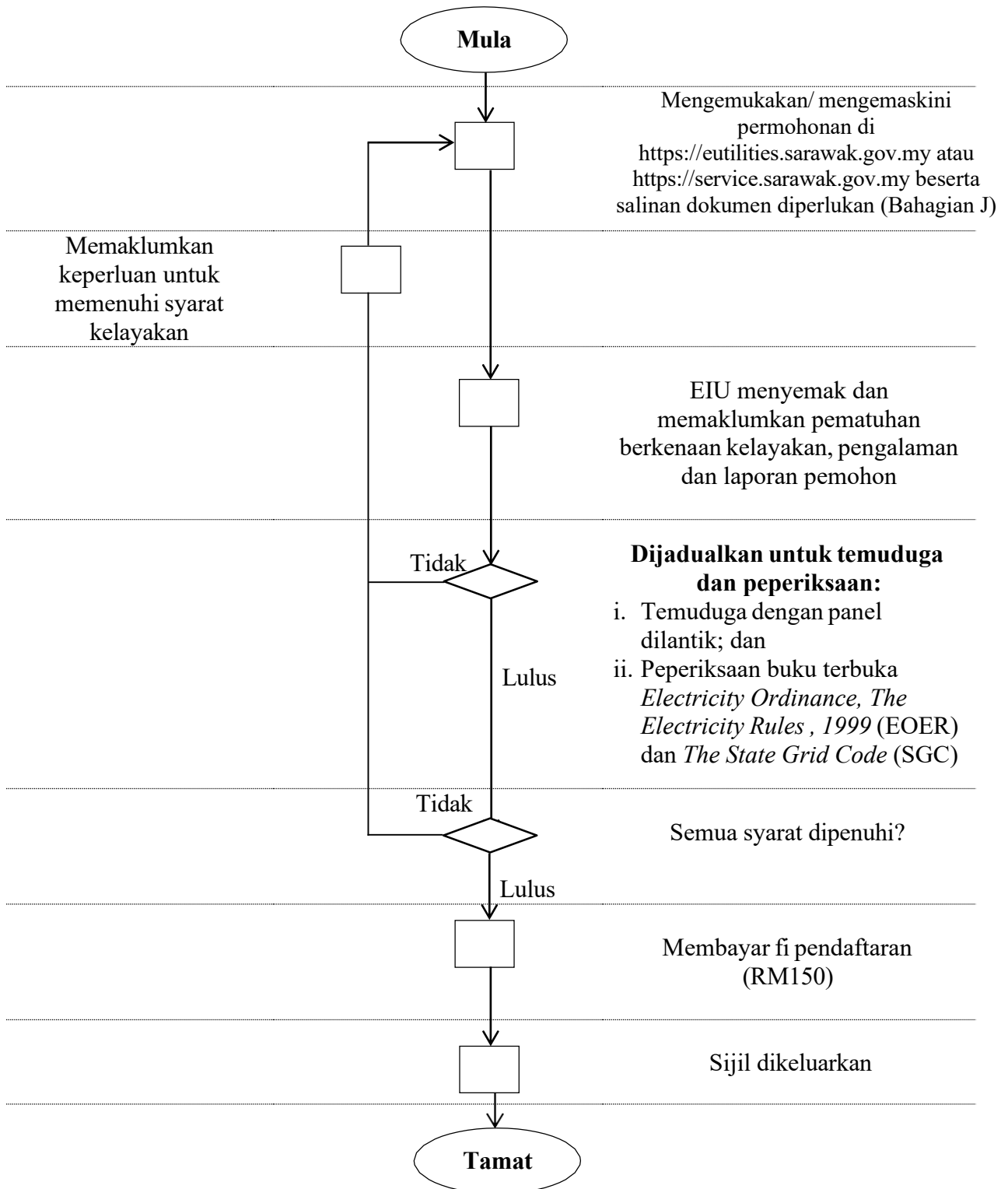
C. Kategori sijil kekompetenan

Kategori	Sekatan Voltan
Pemasangan dan Peralatan	Voltan rendah
Talian Atas	Voltan rendah sehingga 11kV sehingga 33kV sehingga 132kV sehingga 275kV sehingga 500kV Sistem Luar Grid
Kabel Bawah Tanah	
Pencawang Elektrik	
Rekabentuk Solar PV	
	Sistem Tersambung Grid
	Sistem Luar Grid dan Tersambung Grid

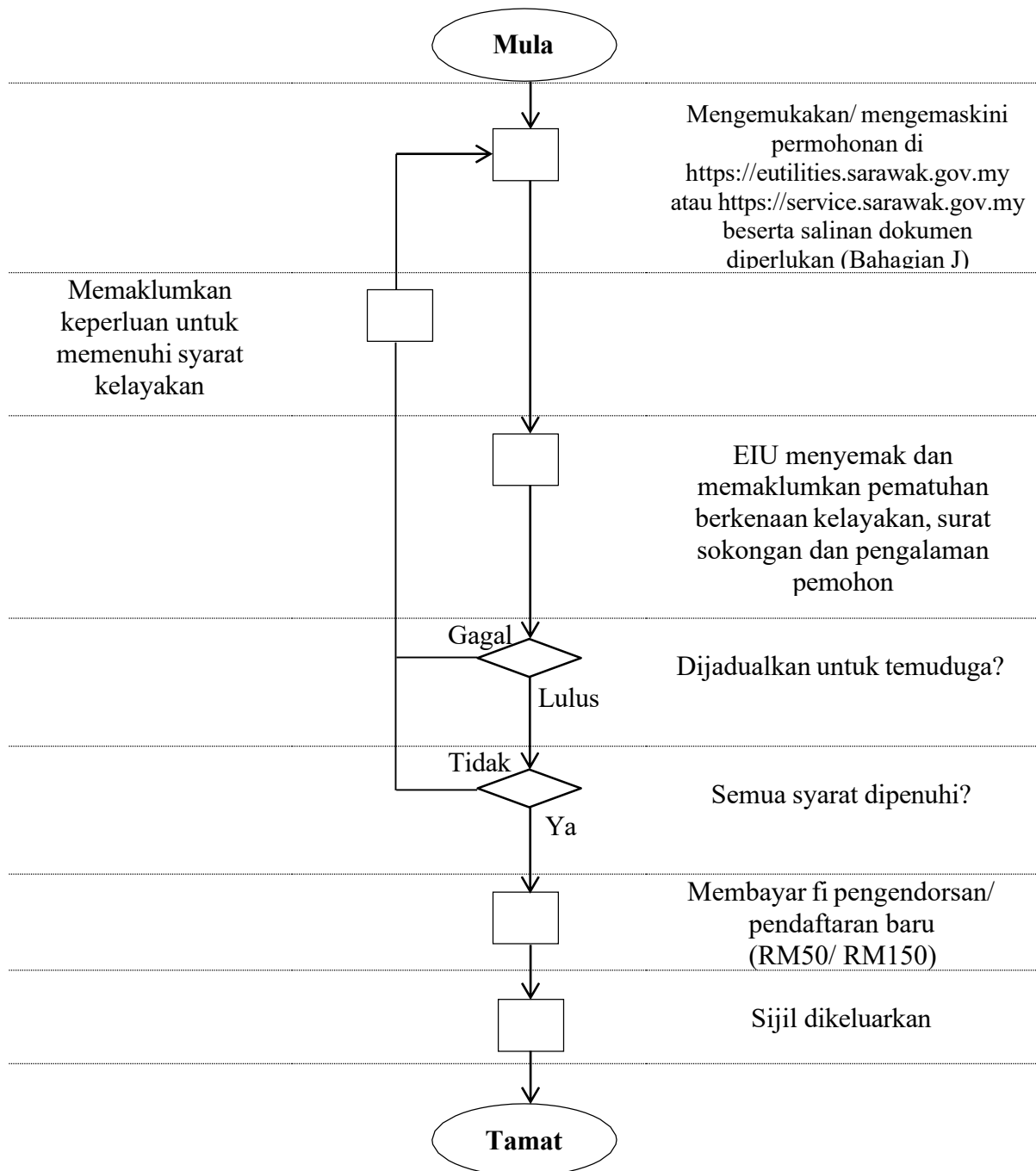
Penduisan	Sekatan Voltan	Kelas Penguasaan	Syarat Kelayakan
Dengan Sekatan (pada premis terhad)	sehingga 11 kV sehingga 33 kV sehingga 132 kV sehingga 275 kV sehingga 500kV	Kelas 1 – Boleh mengeluarkan dan membatalkan permit kerja elektrik Kelas 2 – Tidak boleh mengeluarkan dan membatalkan permit kerja elektrik	<ol style="list-style-type: none"> 1. Pemegang sijil dengan kategori voltan tinggi <ul style="list-style-type: none"> • Pemegang sijil yang tidak lagi bekerja di premis terhad, pengendorsan penguasaan akan dimansuhkan. • Boleh ditambah semula sekiranya melaporkan bekerja di premis baru. 2. Pemegang sijil dengan kategori voltan rendah <ul style="list-style-type: none"> • Pemegang sijil, apabila tidak lagi bekerja di premis terhad, pengendorsan penguasaan akan dimansuhkan. • Boleh ditambah semula sekiranya melaporkan bekerja di premis baru. 3. Sijil tanpa kategori <ul style="list-style-type: none"> • Pemegang sijil tanpa kategori lain apabila tidak lagi bekerja di premis terhad, sijil akan dibatalkan dan ditarik balik. • Boleh dikeluarkan semula sekiranya melaporkan bekerja di premis baru. 4. Mengemukakan dokumen berkenaan (Rujuk senarai semak)

Terbuka (seluruh negeri)	sehingga 11kV sehingga 33kV sehingga 132kV sehingga 275kV sehingga 500kV	Kelas 1 – Boleh mengeluarkan dan membatalkan permit kerja elektrik Kelas 2 – Tidak boleh mengeluarkan dan membatalkan permit kerja elektrik	<ol style="list-style-type: none">1. Pemegang dengan mana-mana kategori voltan tinggi; dan2. Menghadiri kursus-kursus dan latihan pensuisan yang berkenaan
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D. Prosedur bagi sijil dan kategori baru Sijil Kekompetenan sebagai Penyelia Elektrik



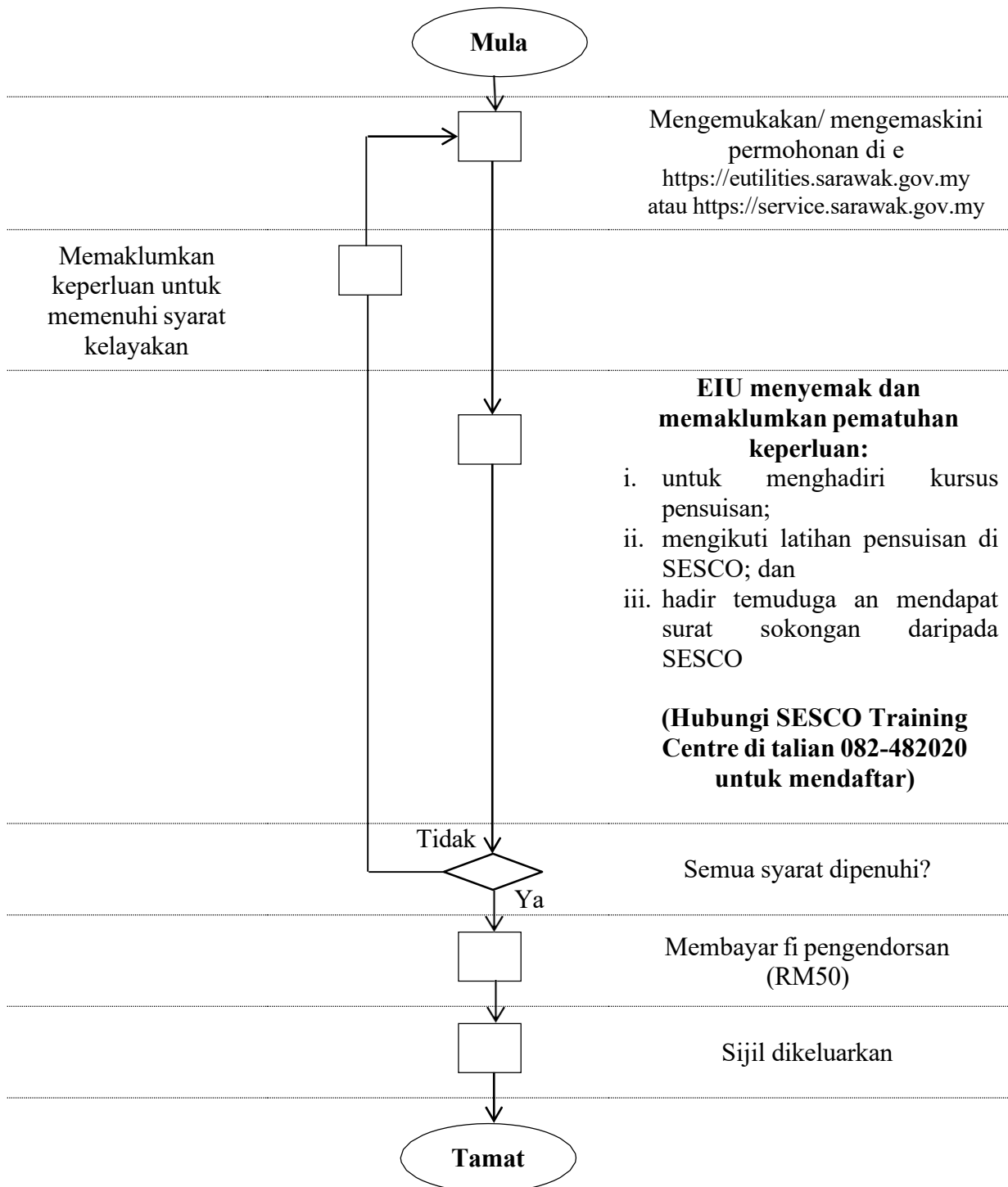
E. Prosidur bagi permohonan naik taraf Sijil Kekompetenan Penyelia Elektrik dengan pensuisan ‘dengan Sekatan’



NOTA:

1. Pensuisan dengan Sekatan adalah endorsan/ kategori dengan menyatakan premis terhadap pada Sijil Kekompetenan sebagai Penjaga jentera, Penyelia Elektrik atau Jurutera Kompeten Elektrik.
2. Pensuisan sekiranya:
 - “Dengan Sekatan” adalah digunakan pada premis terhadap
 - “Terbuka” adalah digunakan di seluruh negeri

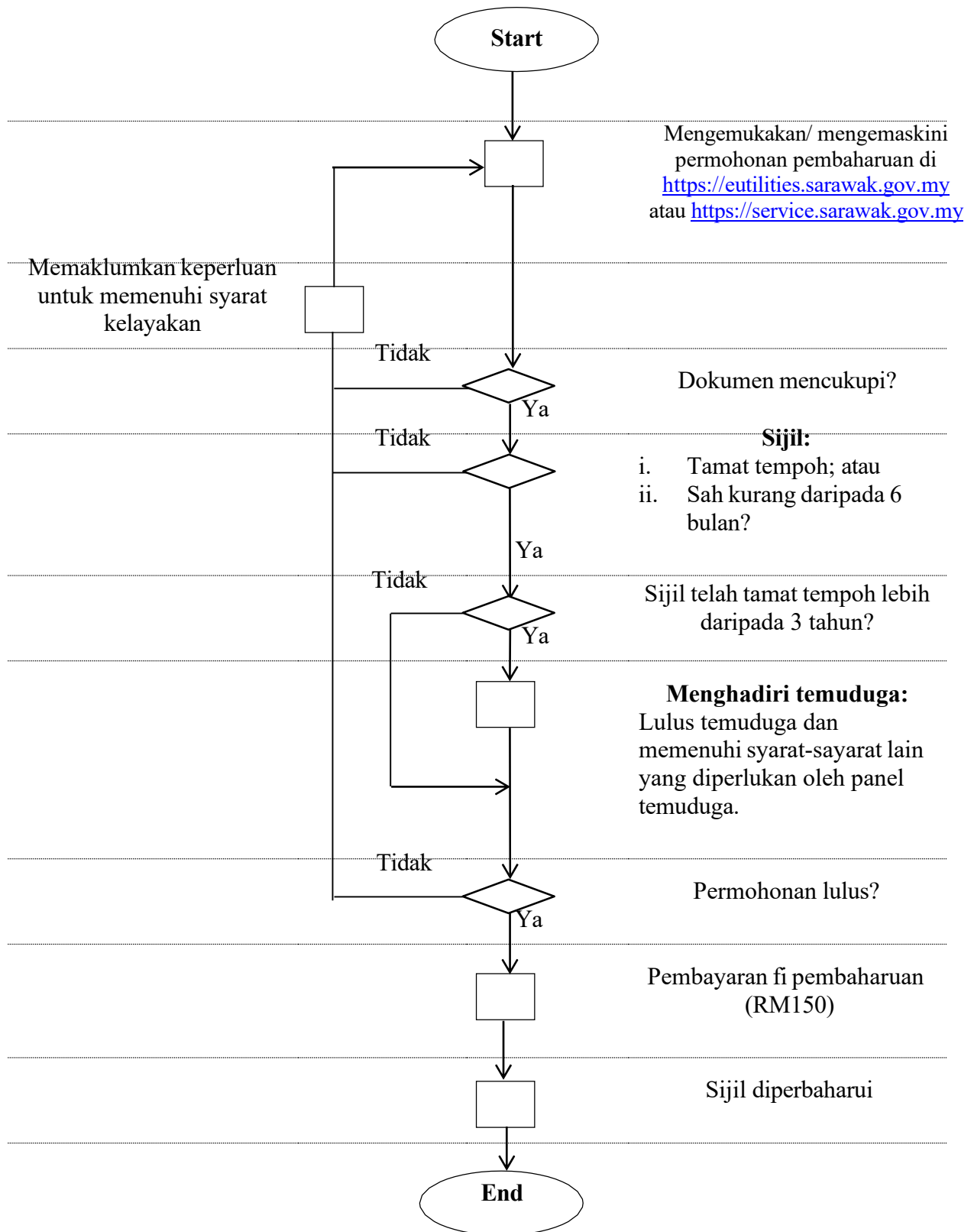
F. Prosidur bagi permohonan naik taraf bagi Sijil Kekompetenan Penyelia Elektrik dengan endorsan pensuisan ‘Terbuka’



NOTA:

1. Pensuisan dengan Sekatan adalah endorsan/ kategori dengan menyatakan premis terhadap pada Sijil Kekompetenan sebagai Penjaga jentera, Penyelia Elektrik atau Jurutera Kompeten Elektrik.
2. Pensuisan sekiranya:
 - “Dengan Sekatan” adalah digunapakai pada premis terhadap
 - “Terbuka” adalah digunapakai di seluruh negeri

G. Prosedur untuk pembaharuan Sijil Kekompetenan sebagai Penyelia Elektrik



H. Fi

No	Jenis Permohonan	Fi
1	Peperiksaan (termasuk temuduga)	RM 150
2	Pendahuluan Pendaftaran	RM 150
3	Pembaharuan (tahunan)	RM 150
4	Pengendorsan (contoh: naiktaraf)	RM 50

I. Sukatan

No	Document
1	Sukatan Kursus Pertolongan Cemas

J. Penyediaan dokumen

No	Dokumen	Salinan
1	Kategori Penyelia Elektrik	
i	Senarai semak dokumen yang dikemukakan (CEE & ES)	1
ii	Salinan Fotostat Kad Pengenalan (IC)	5
iii	Sijil ijazah yang berkaitan	5
iv	Testimoni bekerja	5
v	Laporan mengikut format yang dalam Bahagian A	5
2	Penyelia Elektrik dengan Endorsan/ Kategori Pensuisan dengan "Sekatan"	
i	Senarai semak dokumen yang dikemukakan (Pensuisan dengan Sekatan)	1
ii	Borang CAAC 11	1
iii	Salinan Fotostat Kad Pengenalan (IC)	2
iv	Surat kuasa dan surat sokongan daripada pemilik pemasangan	2
v	Log Pensuisan	2
vi	Manual Prosedur Pensuisan	2
vii	Rajah Skematik Pensuisan	2
viii	Testimoni bekerja	2

Semua dokumen di Bahagian (J) hendaklah dihantar ke alamat berikut:

Electrical Inspectorate Unit
8th Floor LCDA Tower,
Lot 2879, The Isthmus,
Off Jalan Bako
93050 Kuching, Sarawak

K. Dokumen untuk pembaharuan sijil

No	Dokumen
1	Testimoni bekerja baru-baru ini (jika ada)
2	Salinan sah sijil pertolongan cemas
3	Salinan sijil kursus yang dihadiri baru-baru ini yang berkaitan

Semua dokumen di Bahagian (K) perlu dimuatnaikkan ke:

<https://eutilities.sarawak.gov.my>

atau

<https://service.sarawak.gov.my>

FORMS/ CHECKLISTS/ GUIDELINES
BORANG/SENARAI SEMAK/ PANDUAN

**REPORT SUBMISSION GUIDELINE FOR CERTIFICATE OF COMPETENCY AS
ELECTRICAL SUPERVISOR / COMPETENT ELECTRICAL ENGINEER
PANDUAN MENGEMUKAKAN LAPORAN BAGI SIJIL KEKOMPETENAN SEBAGAI
PENYELIA ELEKTRIK KOMPETEN / JURUTERA ELEKTRIK KOMPETEN**

Categories of work

Jenis Kategori Kerja:

Please specify the category(ies) of works you intend to apply for and the associated voltage level.

Sila nyatakan kategori kerjasekatan voltan yang berkaitan.

- A. Overhead lines (415 V, Up to 11 kV, Up to 33 kV, Up to 132 kV, Up to 275 kV)
Talian Atas (415 V, Sekatan melebihi 11 kV, Sekatan melebihi 33 kV, Sekatan melebihi 132 kV, Sekatan melebihi 275 kV)
- B. Underground cables(415 V, Up to 11 kV, Up to 33 kV, Up to 132 kV, Up to 275 kV)
Kabel Bawah Tanah(415 V, Sekatan melebihi 11 kV, Sekatan melebihi 33 kV, Sekatan melebihi 132 kV, Sekatan melebihi 275 kV)
- C. Electrical substations including transformer stations and all associated electrical auxiliaries. (415 V, Up to 11 kV, Up to 33 kV, Up to 132 kV, Up to 275 kV)
Pencawang Elektrik termasuk stesen transformer dan semua auxilari elektrik yang berkaitan(415 V, Sekatan melebihi 11 kV, Sekatan melebihi 33 kV, Sekatan melebihi 132 kV, Sekatan melebihi 275 kV)
- D. LV installation and equipment(415V) where a main switchboard is not required. However, this may include control and communication systems used in consumer premise, the public supply licensee or other licensees power systems
Pepasangan dan Peralatan LV (415V) di mana papan suis utama tidak diperlukan. Walau bagaimanapun, ini termasuk kawalan dan sistem komunikasi yang digunakan di premis pengguna, pemegang lesen bekalan awam atau pemegang lesen sistem kuasa yang lain.

Types of activities:

Jenis-jenis Aktiviti:

1. The report should include a list of work experience in the category applied.
Laporan itu hendaklah termasuk senarai pengalaman kerja dalam kategori yang dipohon.
2. The applicant shall describe in detail the work experience. The descriptions shall focus on activities which had been carried out. In order to assist in the writing of the report, below are the typical engineering projects or works that can be undertaken and demonstrated in an engineering activity. Any other unique characteristics would be useful.
Pemohon hendaklah menerangkan pengalaman kerja secara terperinci. Penerangan hendaklah memberi tumpuan kepada aktiviti-aktiviti yang telah dijalankan. Bagi membantu dalam penulisan laporan itu, di bawah ialah projek-projek kejuruteraan atau kerja-kerja yang boleh biasa dijalankan dan ditunjukkan dalam aktiviti kejuruteraan. Apa-apa ciri-ciri unik yang lain adalah dialu-alukan.
3. The report must highlight on the safety aspects and safety measures taken in undertaking the works.
Laporan itu mesti menekankan kepada aspek keselamatan dan cara-cara keselamatan dalam menjalankan kerja-kerja.

PLANNING

PERANCANGAN

- Perform data collection, engineering investigations, system modelling, simulation studies, technical calculations, engineering analysis, system integration and engineering, calculation of basic design parameters for system and equipment
Melaksanakan pengumpulan data, siasatan kejuruteraan, pemodelan sistem, kajian simulasi, pengiraan teknikal, analisis kejuruteraan, integrasi sistem dan kejuruteraan, pengiraan parameter reka bentuk asas untuk sistem dan peralatan
- Perform calculation and costing
Melaksanakan pengiraan dan tafsiran kos

DESIGN AND CONSTRUCTION

REKABENTUK DAN PEMBINAAN

- Perform design calculations, writing of technical specifications and technical evaluations
Melaksanakan pengiraan, penulisan spesifikasi teknikal dan penilaian teknikal
- Involve in the use of construction related software, cable schedules, factory acceptance tests, site activities and supervision and safety compliance programs
Terlibat dalam penggunaan perisian yang berkaitan dengan pembinaan, jadual kabel, ujian terhadap kilang, tapak aktiviti dan penyeliaan keselamatan dan program pematuhan
- Prepare schematic drawings, shop drawing etc.
Menyediakan lukisan skematik, lukisan kedai dan lain-lain
- Perform equipment testing, equipment calibration, system commissioning etc.

Menjalankan ujian terhadap peralatan, penentuan peralatan, sistem pentauliahan dan lain-lain

- Additional attributes include perform construction site management, quality assurance programs, project budgeting and cost control
Sifat-sifat tambahan termasuk melaksanakan pengurusan tapak pembinaan, program jaminan kualiti, belanjawan projek dan kawalan kos

OPERATION AND CONTROL

OPERASI DAN KAWALAN

- Real time system control and generator control (PF and QV)
Sistem kawalan "Real time" dan kawalan penjana (PF dan QV)
- Switching operation of equipment
Operasi pensuisan pada peralatan
- Operation of switchgears and transformers in situ or remote
Operasi suis gear dan transformer di tempat tetap atau jauh
- System and security performance evaluation and contingency planning
Sistem dan penilaian prestasi keselamatan dan perancangan luar jangka
- Planning and evaluation of system shutdown or restoration
Perancangan dan penilaian ke atas "shut down" sistem atau pemulihan

REPAIR AND MAINTENANCE

PEMBAIKAN DAN PENYELENGGARAAN

- System fault location and incident investigations
Mengesan lokasi kecacatan sistem dan siasatan kejadian
- Equipment inspection and troubleshooting
Pemeriksaan dan mengesan punca masalah peralatan
- Defect identification and replacement of parts, alteration of installation
Mengenalpasti kecacatan dan penggantian peralatan, pindaan perpasangan
- Maintenance planning and programming and/or its implementation
Rancangan penyelenggaraan dan/atau pelaksanaan
- Management of technical equipment performance management
Pengurusan prestasi peralatan teknikal

SWITCHING

PENSUISAN

- The applicant must highlight the various safety procedures when performing the electrical switching operation
Pemohon hendaklah menekankan aspek keselamatan semasa melakukan pensuisan

Note: Please note that your report will form a very important part of the interview. Therefore, simply stating the positions you held, the functions, duties and responsibilities of your position is not acceptable.

Nota: Sila ambil perhatian bahawa laporan anda akan membentuk satu bahagian yang sangat penting dalam temuduga. Oleh itu, hanya menyatakan kedudukan anda diadakan, fungsi, tugas dan tanggungjawab jawatan anda adalah tidak boleh diterima.

ELECTRICAL WORKING / ON-THE-JOB EXPERIENCE LOG SHEET

Name			
I.C No			
Date	Detail Descriptions of Work / Activities*	Supervisor	
		Name (Include Competency or PE number)	Signature

(Your Name in Capital Letters)
(Your Mailing Address)

Director of Electricity Supply,
Ministry of Public Utilities,
11th Floor Wisma Satok,
Jalan Satok,
93400 Kuching, Sarawak

Tuan,

Submission of Report for

<input type="checkbox"/>
<input type="checkbox"/>

Certificate of Competency as a Competent Electrical Engineer

Certificate of Competency as an Electrical Supervisor

(Tick which is applicable)

Please find attached 5 copies of the following documents:

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Photo copy of Identification Card (IC)

Relevant diploma or degree certificate

Valid Professional Engineer registration with the Board of Engineers Malaysia

Testimonial of employment

Report according to the format in Part A

I look forward to your favourable response and will be available when called for interview with BOE appointed panel as to be advised by your office.

Thank you.

(Your signature)

.....
(Your Name in Capital Letters)
(Your IC No)
(Your Telephone No)
(Your email address)

(Your Name in Capital Letters)
(Your Mailing Address)

Director of Electricity Supply,
Ministry of Public Utilities,
11th Floor Wisma Satok,
Jalan Satok,
93400 Kuching, Sarawak

Tuan,

Submission of Report for “Restricted” Switching Endorsement/ Category

Please find attached 2 copies of the following documents:

	Photo copy of Identification Card (IC)
	Form CAAC 11
	Authorization letter and support letter from installation owner
	Switching log
	Switching Procedure Manual
	Switching Schematic Diagram
	Testimonial of employment

I look forward to your favourable response and will be available when called for interview with BOE appointed panel as to be advised by your office.

Thank you.

(Your signature)
.....
(Your Name in Capital Letters)
(Your IC No)
(Your Telephone No)
(Your email address)

...pdf document